University of KwaZulu-Natal Library, Pietermaritzburg

DATABASE SEARCHING

Instructional guide

Databases contain references to journal articles, chapters in books and in some cases, theses and dissertations. Some databases also include the full text of the articles and other items.

The purpose of this guide is to list and explain some of the most common search features and to illustrate them with selected examples. Details of how the features can be used in each database can be obtained from the help screens that are provided by the database. This guide refers to searching all electronic material available in databases.

Contents of this guide

PREPARING TO SEARCH

Analysing the topic

It is important to scrutinise a topic before one starts searching for information. A topic can usually be broken down into two or more sub-topics or concepts. One's search may locate articles that deal with all the concepts together. If not, one may have to look for articles on the separate concepts or rethink the keywords or terms one selected.

> Example: Under what circumstances are long-distance air travellers most likely to develop deep vein thrombosis?
> The two concepts that this topic can be broken down into are: air travellers and deep vein thrombosis.

To do
o   Identify the sub-topics or concepts in your topic.

Identifying keywords and synonyms

Keywords are words that concisely and accurately describe a topic. For every keyword or key term, there may be one or more synonyms. Using the topic above as an example:

> Example: Synonyms for air travel include: flight or aeroplane or airplane or airline or aircraft and passengers - there may be more!
> Synonyms for deep vein thrombosis include: blood clots or blood clotting or thrombophlebitis - there may be more!

Words such as - are, to, not, away, a, the, and, of - are usually ignored in searches and for this reason are called stopwords.

To do
o   Identify keywords or key terms for your search
o   List all possible synonyms for your keywords or terms
o   List any words or terms that you want excluded from your search
o   Be prepared to add keywords to these lists or to change them as you search!

Selecting suitable databases

Databases are either discipline specific or multidisciplinary. It is important for you to establish which databases best suit your field of study. It is good to search in more than one database.

To do
o   Select suitable databases to search.

SEARCHING

What follows is an explanatory list of search features to look for in a database if one wants to do more than a basic search.

Types of searches
Most databases provide several types of searches, for example: Basic, Advanced or Expert. Databases usually default to one type but include other options.

> Example: In both EBSCOhost and ScienceDirect databases, the default search type is a Basic search, but it is possible to select an Advanced search.

To do
o   Look at the types of searches available in a database you are searching and select what will be most useful.

Field searching
Most databases enable searchers to choose one or more fields (such as author, title, subject or keyword) in which to conduct a search. The number of fields from which one may select, often depends on the type of search that is being conducted.

> Example: In the SA ePublications database in SABINET, a Basic search will allow one to choose whether to search in the Article title OR Journal title OR Author OR Abstract field OR in all of them together.
> Example: In EBSCOhost databases, an Advanced search allows one to select from various fields in which to search, from a drop down menu.

To do
o   Decide whether you want to limit your search to one or more fields or to search across all of them.

Browsing the index or indexes
It is possible to browse the list of all words (excluding stopwords) that have been used in the different fields in many databases. The list of words usually includes the number of occurrences in each field or in the database. This is useful because it includes variant and incorrect spellings which searchers might not have known about.

> Example: In EBSCOhost databases, it is possible to browse Subjects (and other less useful fields) by clicking on 'Subject Terms' search and following the instructions.

To do
o   Decide whether browsing in the index or indexes will be useful or not.

Limiting results

In most databases one can apply various 'limits' to a search before one searches, once one has the search results, or at both stages of the search.

> Example: In the CAB Direct database, one can specify that articles only be in English and also limit the search by year of publication.
>
> Example: In EBSCOhost databases, one can limit the search to full text only, to peer-reviewed journals only, to a particular publication, by document type, by date and in other ways before conducting the search.

To do
o Find out what limits are possible and whether they would be useful to you.
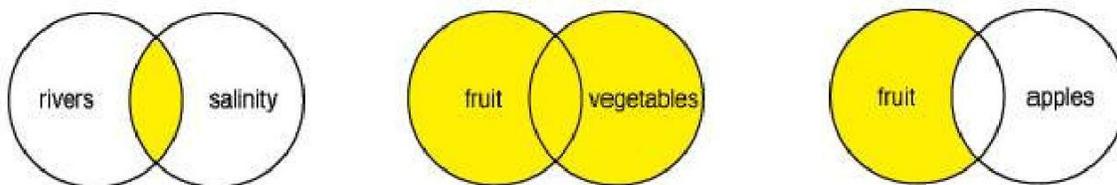
Search operators

Boolean operators can be used to combine keywords or terms

> AND finds records that include BOTH
> words Example: rivers AND salinity
> only finds records that include both words
>
> OR finds records that include EITHER of the words (or both
> words) Example: fruit OR vegetables
> finds records that include either word (or both words)
>
> NOT excludes records from the search
> Example: fruit NOT apples
> finds records that include fruit but exclude apples

These searches can be illustrated with Venn diagrams.

Left to right: Venn diagrams illustrating use of AND, OR, NOT. Shaded areas represent records found.

Using brackets

In most databases, the Advanced search allows one to make use of Boolean operators. However, if this feature is not available, it may be necessary to use brackets to enclose different elements in a search statement.

> Example: (conservation OR preservation) AND (books OR journals)

To do
o Decide how to use Boolean operators to combine your keywords or terms remembering that OR is useful to ensure that your search includes all synonyms; AND is useful for combining concepts; you may have to use brackets.

Adjacency or proximity operators are used to find words next to, or near other words. Some databases recognise phrases (such as 'capital punishment'), but in others it is necessary to indicate that the words should be next to each other.

> Example: In EBSCOhost databases,
> online w1 searching
> will find records that include both words in that order but with one other word in between, such as
> online bibliographical searching.

> Example: In EBSCOhost databases,
> online n2 searching
> finds records that include both words in any order with no more than two words between them, such as online bibliographic database searching, searching bibliographic databases online.

Phrase searching is a way to retrieve records containing specific phrases. To search for a specific phrase, some databases require quotation marks around the phrase. A phrase search will then locate only records containing the words *in the particular order in which they appear*.

> Example: In SABINET databases, using " " will ensure that more than one word is treated as a phrase. Thus, "attention deficit disorder" will find records with these words next to each other.

To do
o Decide whether to use proximity operators in your search.

Plurals can be searched for concurrently with a singular form in some databases, by using a specific symbol. However, it is worth remembering that some search software will automatically find the plural form of a word if the singular form is requested.

> Example: In SABINET databases, the plural symbol is a + . Thus, school+ will find records that contain school or schools.

> Example: In EBSCOhost databases, a request for school will find school or schools.

Truncation allows one to find words that begin with a certain combination of letters. A truncation symbol is placed after the combination of letters.

> Example: In SABINET databases, the truncation symbol is a ? . Thus, child? will find records with any word that starts with the letters child, such as child, children, childhood or childlike.

> Example: In EBSCOhost databases, the truncation symbol is a * .

Wildcards are symbols that are used to find various forms or spellings of a word.

> Example: In SABINET databases, the wildcard symbol is a # . Thus, wom#n will find records that contain woman or women.

> Example: In EBSCOhost databases, the wildcard symbol is a ? .

To do
o Decide how to use plural, truncation and/or wildcard symbols to improve your search.

SEARCH RESULTS

Once one has a set of search results, most databases allow one, or more of the options listed below.

Selecting a level of display that gives more information
Most databases have a default display which is brief but allow at least one other more detailed format to be selected.

> Example: In SABINET and EBSCOhost databases, the default display is brief but the full record can be displayed by clicking on the title.

Marking (tagging) records to print, save, e-mail or export
Searchers can mark relevant records to print, save, e-mail or export to a bibliographic management program (such as RefWorks or EndNote).

> Example: In SABINET and EBSCOhost databases, records may be printed, saved, e-mailed or exported.

Lateral (sideways) searching from specified elements in records
One can select certain elements in a record to start a new search.

> Example: In EBSCOhost databases, authors, subjects and other elements are hyperlinks that can be followed.